

Remarks:

Reconsideration and allowance of the Claims of the present invention is respectfully requested. Claims 1-3, 5, 7, 8, and 13 have been amended above to address issues raised by the Examiner as explained below.

Claim Objections Under 37 CFR 1.75(c)

Claims 5 and 6 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend on another multiple dependent claim. In reply, Claim 5 has been amended to only depend on Claim 3. As such, this objection is overcome.

Claim 1 is objected to because the Examiner believes "polybenzimidazol" should be spelled "polybenzimidazole". In reply, "polybenzimidazol" has been changed to "polybenzimidazole" in Claim 1 and in the Specification. As such, this objection is overcome.

Rejection Under 35 U.S.C. 112, Second Paragraph

Claims 1-4, 7, 8, 13-18, 20, and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Specifically, the rejection states that the phrase two "separate single plies" is unclear in how it is used in the Claims. The Examiner explains that the plies are not "separate" when they are woven together. In reply, the Claims have been amended to change the phrase "separate single plies" to "single plies". As such, this rejection is respectfully overcome and should be withdrawn.

Rejection Under 35 U.S.C. 103(a)

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 03/039280 (English Translation) in view of Faircloth (U.S. Patent 3,359,610). The rejection states that (1) WO 03/039280 fails to teach interweaving together the different materials in the different layers to create pocket regions that can contract upon exposure to heat and (2) Faircloth is drawn to a woven fabric with pocket regions that pucker as a result of heat. Thus, the rejection concludes it would have been obvious to

interweave the different fiber materials in a multilayered fabric as taught by Faircloth to create the fabric of WO 03/039280 with woven pocket regions that pucker upon exposure to heat.

Applicants respectfully traverse the Examiner's obviousness rejection. The cited references do not teach or suggest the claimed improvement. No suggestion can be found in the references for making the combination suggested by the Examiner. Even if the references were considered in combination by one of ordinary skill in the art, the claimed invention would not have been and is not obvious therefrom. In view of these facts, the Examiner has not established a prima facie case of obviousness.

Neither one of the two applied references disclose a fabric comprising a least two single plies (2,3) "wherein the two single plies (2,3) are woven together in such a way that they cross each other at the predefined positions so that the same side (S1 or S2) of two adjacent pockets is alternately made of the two different single plies (2,3)". For this reason alone, all Claims are novel and unobvious over the applied art.

This recited structure is illustrated in the preferred embodiment of the fabric of the present invention in Figures 2, 4a, 4b, 4c, 5 and 6. Page 7, line 25, through page 8, line 10, describes this structure as follows:

" ... the two separate single plies being woven together in such a way that they cross each other at the predefined positions so that the same side (Figs 2 and 4a, S1 or S2) of two adjacent pockets is alternately made of the two different separate single plies (2,3) according to a chess design. In the first phase of the thermal exposure (up to about 3 seconds, $T_0 < T_1$, Fig 4b), the side (S1) of the fabric exposed to the heat source will shrink relatively fast so that air filled pockets will be formed rapidly. Due to the difference in the dimensional thermal shrinkage of the plies (2,3) and because of the chess design of the fabric, the adjacent air filled pockets will alternately have two different volumes V_1, V_2 , ($V_1 > V_2$ Fig 4b). In the second phase of the exposure (from 3 seconds up to 8 seconds or more, $T_0 = T_1$, Fig. 4c), the side (S2) will also start to shrink. Due to the chess design of the fabric, and to the difference in the dimensional thermal shrinkage of the two plies (2,3), air filled pockets having a volume V_3 ($V_3 < V_1, V_2$) will be formed on both sides of the fabric according to the shifted configuration depicted in Fig. 4c. Such air filled structure will be maintained during the rest of the time so that an air insulating system will be available during the whole thermal exposure."

To elaborate, in this embodiment, Figure 2 shows one side (e.g., S1) of the fabric 1 where the pockets are square. Figure 2 shows that the fabric 1 has a chess board design where the white squares represent portions of one of the two plies and the cross hatched squares represent positions of the other ply. In other embodiments, the pockets can have other shapes but in all embodiments, each side of the fabric will adjacent pockets alternately made of the two different plies. Neither one of the applied references disclose or suggest this arrangement as recited in the final wherein clause of Claim 1.

Referring to Figures 2–5 of WO 03/039280, it discloses a fabric made of a first ply woven of warp yarns C1 and weft yarns T1 and a second ply woven of warp yarns C2 and weft yarns T2 where some of the warp yarns C1 of the first ply 1 loop around weft yarns T2 of the second ply to form tubular passages best seen in Figure 3. Figure 2 clearly shows that all or virtually all yarns visible from the top of the fabric are from the first ply 1. No pockets are visible from the top made of ply 2. Similarly, Figure 2 shows that virtually all yarns visible from the bottom of the fabric are from the second ply 2 except for the loops of the warp yarns C1 sewing the two plies together. No pockets are visible from the bottom made of ply 1. Thus, WO 03/039280 fails to disclose the arrangement recited in the final wherein clause in Claim 1.

Faircloth also fails to disclose this. Instead, Faircloth discloses a fabric comprising a first ply 10 woven from warp yarns 13 and filler yarns 12, a second ply 20 woven from warp yarns 23 and filler yarns 22, and separate elastic yarns 31,32 that interconnect the two plies in a way that causes areas to pucker after heat treating. Thus, each side of the two ply fabric only shows either ply 10 or ply 20, plus loops of the elastic yarns connecting the two plies together, but neither side shows some pockets of one ply and other pockets of the other ply. Thus, Faircloth fails to disclose the arrangement recited in the final wherein clause in Claim 1.

Further, the arrangement recited in the final wherein clause in Claim 1 is substantially different than the structures disclosed in either of the applied references. As such, the arrangement recited in the final wherein clause in

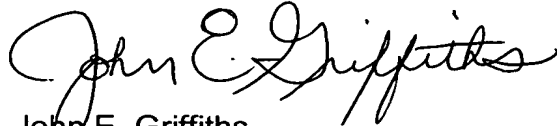
Claim 1 (and thus Claim 1 itself) is unobvious in view of the applied references.

As such, it is respectfully submitted that this rejection is unjustified and should be withdrawn.

Conclusion

The foregoing reasons are believed to comprise a full and complete response to the outstanding non-final Examiner's Office Action. Further, it is submitted that any basis for the rejections of the Claims has been obviated. Thus, Claims 1-14 are respectfully submitted to be in condition for allowance. Favorable reconsideration with subsequent allowance of Claims 1-8, 13-18, 20, and 21 is respectfully requested. If any matter remains to be resolved before allowance, the Examiner is encouraged to call Applicants' attorney at the number provided below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "John E. Griffiths". The signature is fluid and cursive, with the first name "John" being the most prominent part.

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